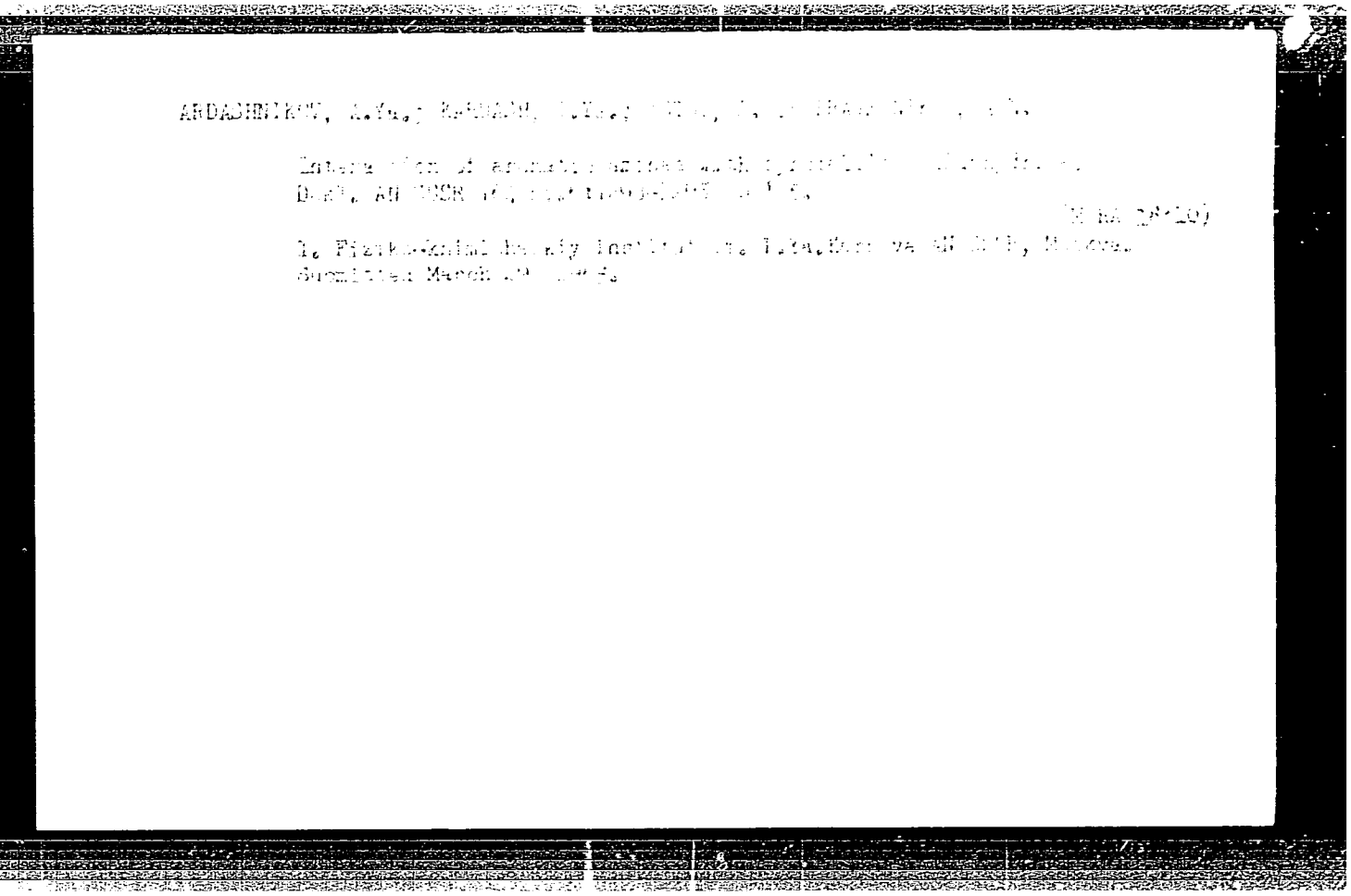
KISS, Laszlo; PRAVEDNYIKOV, A.N.; MEDVEGYEV, Sz. Sz.

Study on the nature of the active centers initiating the low-temperature radiation polymerization of acryl-nitrile. Magy kem folyoir 71 no.2:57-62 F '65.

1. Research Institute of Plastics Industry, Budapest.
Submitted June 12, 1964.

YELISEYEVA, N.V.; KOTOV, B.V.; SHARPATYY, V.A.; PRAVEDNI V, A.N.

EPR spectra of certain irradiated nitriles. Opt. i spektr. 18 no.5:842-845 My '65. (MIRA 18:10)



L 17996-66 EWT(m)/EWP(j)/T/ETC(m)-6 WW/RM

ACC NR: AP6006981 (A) SOURCE CODE: UR/0190/66/008/002/0272/0277

AUTHOR: Braz, G. I.; Kardash, I. Ye.; Yakubovich, V. S.; Myasnikova, G. V.; Ardashnikov, A. Ya.; Oleynik, A. F.; Pravednikov, A. N.; Yakubovich, A. Ya.

ORG: Physical Chemistry Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut)

TITLE: Polybenzoxazoles: preparation and thermal degradation

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 2, 1966, 272-277

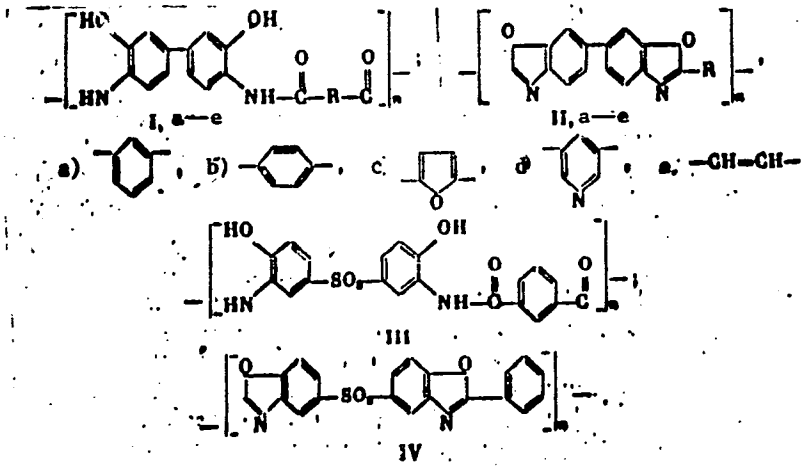
TOPIC TAGS: heat resistant polymer, polyoxamide, polybenzoxazole

ABSTRACT: New high-thermal-stability polybenzoxazoles have been prepared which withstand temperatures up to 520—530C in vacuum. Polyoxamide intermediate products (I, a—e) were prepared by low-temperature (~ 0C) polycondensation of 3, 3'-dihydroxybenzidine with isophthaloyl, terephthaloyl, 2,5-furandicarbonyl, 3,5-pyridinedicarbonyl, and fumacyl chlorides in dimethylacetamide. The polyoxamides were converted to the polybenzoxazoles (II, a-e) by thermal cyclodehydration. In addition, polycondensation of bis(4-hydroxy-3-aminophenyl) sulfone with isophthloyl chloride produced polyoxamide III which was converted to polybenzoxazole IV.

Card 1/3 UDC: 541.64+678.01:54+678.67

L 17996-66

ACC NR: AP6006981



I, a—e

II, a—e

where a) , b) , c) , d) , e) —CH=CH—

III

IV

All the polyoxamides except III were colored materials, and all were soluble in conc. H_2SO_4 and in some amide solvents. Polybenzoxazoles IIa and IIb are soluble in conc. H_2SO_4 and insoluble in amide solvents, even in the presence of LiCl; II c—e are insoluble in conc. H_2SO_4, apparently owing to cross-linking. The poly-

Card 2/3

L 17996-66
ACC NR: AP6006981

benzoxazoles show bright luminescence. Structures were confirmed by IR spectroscopy and elemental analyzing. Orig. art. has: 3 tables, 3 figures, and 4 formulas. [SM]

SUB CODE: 11/ SUBM DATE: 13Mar65/ ORIG REF: 001/ OTH REF: 009/ ATD PRESS: 4213

Card 3/3

L 10393-67 EWT(m)/EWP(j) RM

ACC NR: AP7003123 SOURCE CODE: UR/0192/66/007/004/0511/0515

AUTHOR: Yeliseyeva, N. V.; Sharpatyy, V. A.; Pravednikov, A. N.

ORG: Physical Chemical Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut)

TITLE: Electron paramagnetic resonance spectrum of the anion-radical dimethylphenylphosphine

SOURCE: Zhurnal strukturnoy khimii, v. 7, no. 4, 1966, 511-515

TOPIC TAGS: EPR spectrum, alkylphosphine

ABSTRACT: The paper reports on a study of the donor-acceptor properties of various elements incorporated in alkyl substituents of the benzenyl ring (PhXR) by examining the capacity of these elements (X) to form pi-bonding with the aromatic system.

Negative ions of dimethylphenylphosphine were obtained by reduction of dimethylphenylphosphine on a potassium mirror in dry and carefully degassified solutions in tetrahydrofurane and dimethoxyethane. The reduction of anions and the recording of the EPR spectrum were carried out at a temperature of -70°. The type EPR-2 IKhF radiospectrometer was used. The curve of the paramagnetic absorption of the anion-radical was calculated, revealing all features of the ultrafine structure. Spin density values in the benzenyl ring of the radical were determined. The distribution of electron density at the ring pointed to the electron-acceptor action of the $P(CH_3)_2$ group in the radical investigated. Orig. art. has: 2 figures, 4 formulas and 1 table. [JPRS: 38,970]

SUB CODE: 07 / SUBM DATE: 26Oct64 / ORIG REF: 003 / OTH REF: 010

Card 1/1 bpo UDC: 538.113

L 03767-67 EWT(m)/EWP(j)/T WW/RM

ACC NR: AP6019540 (A,N) SOURCE CODE: UR/0190/66/008/006/1015/1017

63
B

AUTHOR: Novikov, S. N.; Kagan, Ye. G.; Pravednikov, A. N.

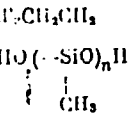
ORG: Physico-Chemical Institute im. L. Ya. Karpov (Fiziko-khimicheskiy institut); All-Union Scientific-Research Institute of Synthetic Rubber im. S. V. Lebedeva (Vsesoyuznyy nauchno-issledovatel'skiy institut sinteticheskogo kauchuka)

TITLE: Thermal decomposition of 3,3,3-trifluoropropyl(methyl)siloxanes

SOURCE: Vysokomolekulyarnyye soyedineniya, v. 8, no. 6, 1966, 1015-1017

TOPIC TAGS: siloxane, heat resistance, synthetic material, reaction mechanism, thermochemistry, silicon plastic, THERMAL DECOMPOSITION

ABSTRACT: Thermal decomposition of poly-3,3,3-trifluoropropyl (or methyl) siloxanes of the general formula



was studied. Samples were heated in vacuo, to 400°C in a closed system. It was found that during the thermal decomposition of poly-3,3,3-trifluoropropyl(methyl)siloxanes, a depolymerization in the main polymer chain occurs; this is reflected in the splitting off of the 3,3,3-trifluoropropyl groups. It was found that this process is ac-

UDC: 678.01:54+678.84

Card 1/2

L 03767-67

ACC NR: AP6019540 O

companied by an intramolecular transfer of fluorine from the γ-position in the 3,3,3--trifluoropropyl group to the silicon atom. The rate of this transfer is greater than the rate of splitting off in methyl groups. It was also found that in addition to these processes, there also occurs a decomposition of the 3,3,3-trifluoropropyl group. Orig. art. has: 1 formula.

SUB CODE: 07/ SUBM DATE: 29May65/ ORIG REF: 002/ OTH REF: 007

Card 2/2

PRAVDYUK, V.V., kand.voyen.-morskikh nauk

Some problems of long range radio navigation. Inform. sbor. TSNIIMF no.79; Sudovozh.i sviaz' no.20:42-49 '62. (MIRA 16:7)
(Loran)

41305

S/035/62/000/010/108/128
A001/A101

AUTHOR: Pravdyuk, V. V.

TITLE: Precision of locating a point by means of the Decca system

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 10, 1962, 33, abstract 10G176 ("Tr. Tsentr. n.-i. in-ta morsk. flota", 1961, no. 39, 30 - 40)

TEXT: The author considers the problem of feasibility of using foreign chains of the Decca system for navigation of ships of the USSR marine and calculates, in this connection, the magnitude of errors in determining distance differences measured by this system. The following factors affect the measurement accuracy in day time: 1) The drift station phase difference with respect to that of the key station (synchronization error). This error is estimated by the average value equal to 0.005 μsec and is calculated by the formula: $\sigma = 0.005 \cdot f \cdot 2\pi \cdot 10^{-6}$; 2) Inexact knowledge of the actual phase velocity of radiowave propagation over the underlying surface. This error is estimated to be 0.01 cycle; 3) Instrumental errors. The error value of the receiver-indicator

Card 1/2

S/035/62/000/010/108/128
A001/A101

Precision of locating a point...

device, including the random error of phasometer scale reading, is assumed to be equal to 0.01 cycle. On the basis of the assumed magnitudes, the author arrives at a conclusion that an error in measuring distance difference by the Decca system is characterized, on an average in day time, by the value 45.4 m. In night time, errors are considerably greater because of the space wave influence, and exceed 3,000 m for distances over 250 miles. Graphs are presented in the article, facilitating calculations of estimating the precision of locating a point in day and night time.

B. Serapinas

[Abstracter's note: Complete translation]

Card 2/2

S/194/62/000/010/062/084
A061/A126

13,2300

AUTHOR: Pravdyuk, V.V.

TITLE: Accuracy of position determination by the "dekka" system

PERIODICAL: Referativnyy zhurnal, Avtomatika i radioelektronika, no. 10, 1962, 63, abstract 10-7-125ya (Tr. Tsentr. n.-i. in-ta morsk. flota, 1961, no. 39, 30 - 40)

TEXT: Reasons are given regarding the magnitude of errors in phase difference measurements by the "dekka" radio navigation system during day- and nighttime. The effect of similar errors on the accuracy in determining the position of a ship within the range limits of the navigation system is considered. The use of calculated diagrams excludes complicated calculations for estimating the accuracy in determining the ship's position, and also permits the plotting, on maps of position determination, lines of equal accuracies within regions served by chains of radio stations of the system. It is shown that navigation in the Western part of the Finnish Gulf or in the Gulf of Riga, which are served by the so-called Swedish chain of radio stations of the system, can be performed with

Card 1/2

S/194/62/000/010/062/064
Accuracy of position determination by A061/A126

the required accuracy. There are 5 figures and 2 references.

From the author's summary

[Abstracter's note: Complete translation]

Card 2/2

PRAVE, V.Ye.; STEPANISHCHEVA, Z.G.

Safe method for chamber disinfection of clothing contaminated by pathogenic fungi. Vest. derm. i ven. 37 no.6:61-63 Je '63. (MIRA 17:6)

1. Moskovskaya gorodskaya dezinfektsionnaya stantsiya (glavnyy vrach I.N. Kudrinskiy) i mikologicheskiy otdel (zav. - prof. A.M. Ariyevich) TSentral'nogo kozhno-venerologicheskogo instituta (dir. N.M. Turanov) Ministerstva zdravookhraneniya RSFSR.

PRAVK, V.Ye., vrach; AGAFONOVA, L.I., bakteriolog

Prophylactic disinfection of dishes in children's institutions. Gig. i san. 21 no.9:75-78 S '56. (MLRA 9:10)

1. Iz laboratorii sanitarno-epidemiologicheskoy stantsii Sverdlovskogo rayona Moskvy.

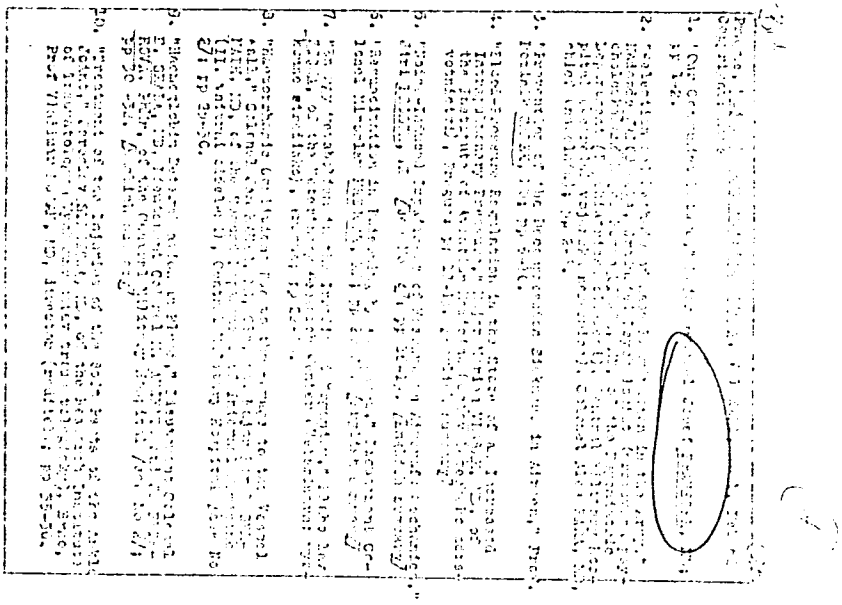
(ANTISEPSIS AND ASEPSIS
disinfect.
of dishes in children's institutions)

PRAVE, V.Ye.; ROMAKINA, A.V.; AGAFONOVA, L.I.

Systematic bacteriological control over level of sanitation in nursery schools. Gig. i san. no.7:49 Jl '54. (MLRA 7:8)

1. Iz laboratorii Sverdlovskoy rayonnoy sanitarno-epidemiologicheskoy stantsii Moskvy.
(SCHOOL HYGIENE)

PRAVECEK, J.



PRAVECZKI, Endre

Renormalization of the ideal spin wave theory to temperature.
Koz fiz kozl MTA 11 no.5:355-383 '63.

PRAVECZKI, Endre

Theoretical foundations for the arrangement of the simple and field-centered cubic lattice alloys containing AB. Magy fiz folyoir 10 no.6:479-513 '62.

1. Kozponti Fizikai Kutato Intezet Szilardtestfizikai Laboratoiuma, Budapest.

PRAVECZKI, Endre

Determination of magnetization at low temperature on the basis of the Green's function method. Koz fiz kozl MTA 10 no.6:423-426 '62.

PRAVECZKI, Endre

Determination of the magnetization of the Heisenberg model on the basis of the Green's function method in case of S>1/2. Koz fiz kozl MTA 10 no.6:427-432 '62.

PRAVECZKI, Endre

Selections from the most recent chapters of the theory of ferromagnetism. II. Magy fiz folyoir 10 no.5:393-410 '62.

1. Kozponti Fizikai Kutato Intezet, Szilardtestfizikai Laboratorium, Budapest.

PRAVEDNYY, G.Kh., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Colmatage of small cracks in concrete. Izv.VNIIG 61:72-77 '58. (MIRA 13:6)
(Concrete construction)

PRAVEDNYY, G.Kh., starshiy nauchnyy sotrudnik, kand.tekhn.nauk

Underwater hydraulic-fill construction of seepage-reducing linings.
Izv.VNIIG 62:97-109 '59. (MIRA 13:6)
(Hydraulic engineering)

KOZHEVNIKOV, S.N.; PRAZDNIKOV, A.V.; IOFFE, A.M.; GLIKIN, M.P.

Stand for the testing and installation of a pilgrim mill feed mechanism. Metallurg 9 no.3:29-30 Mr '64. (MIRA 17:3)

1. Institut chernoy metallurgii i zavod im. K.Libknekhta.

ALEKSANDROVA, Yu.A.; KHUAN YUY-LI [Huang Yü-li]; PRAVEDNIKOV, A.N.; MEDVEDEV, S.S., akademik

Reactions of radicals of the RO type containing oxygen. Dokl. AN SSSR 123 no.6:1029-1032 D '58. (MIRA 12:1)

1. Nauchno-issledovatel'skiy fiziko-khimicheskiy institut imeni L. Ya. Karpova.
(Radicals (Chemistry)) (Chemical reaction, Rate of)

PRAVEDNIKOV, N.K.; KATS, R.M.

Equations for the movement of the water-oil contact in systems of pattern flooding. Trudy VNII no.42:223-234 '65.

(MIRA 18:5)

PRAVEDNIKOV, N.K.

Prediciting the flooding of oil pools. Nauch.-tekh.sbor.po dob.nefti. no. 14:92-97 '61. (MIRA 17:6)

[illegible] ...AVRONIKOV, [illegible]

[C]alculating the [fluid] yield of a multiwell system of wells with given bottom pressures. Nauch.-tekh.sbor.po dob.nefti. no.[illegible]:83-87 '61. (MIRA 17:5)

PRAVEDNIKOV, N.K.; RAKOVSKIY, N.L.

Effect of the nonuniformity of reservoir permeability on the solvent flooding process. Nauch.-tekh.sbor.po dob.nefti no.18: 48-52 '62. (MIRA 17:6)

PRAVEL'NIKOV, N.K.; RAKOVSKIY, N.L.; SELYUNIN, A.N.

Possibilities of injecting liquefied gases in different areas of the Romashkino field with a view to increasing petroleum recovery and the level of petroleum production. Trudy VNII no.40:241-256 '63 (MIRA 17:7)

LEYBIN, E.L.; PRAVEDNIKOV, N.K.

Study of errors in the determination of the parameters of the reservoir-permeability law of distribution and the effect of these errors on calculations of flooding. Trudy VNII no.40:231-240 '63 (MIRA 17:7)

RYABININA, Z.K.; PRAVEDNIKOV, N.K.

Method of hydrodynamic calculations for determining the recovery of oil and water considering the nonuniform permeability of a layer when programming the development of oil fields. Trudy VNII no.37:158-179 '62. (MIRA 16:6)
(Oil field flooding)

PRAVEDNIKOV, N.K.

Calculating the encroachment of oil pools. Nauch.-tekh. sbor, po dob. nefti no.13:90-96 '61. (MIRA 16:7)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.
(Oil reservoir engineering)

PRAVEDNIKOV, N.K., inzh.; KATS, R.M., inzh.

Considering the characteristics of the performance of wells in line flooding when calculating the water encroachment of an oil layer. Nauch. zap. Ukrniiproekta no.9:111-124 '62. (MIRA 16:7)
(Oil field flooding)

PRAVEDNIKOV, N.K., inzh.; KUCHAPINA, M.I., inzh.; ZLOTNIKOVA, R.B., inzh.

Calculating the degree of water encroachment of multi-pay oil pools. Nauch. zap. Ukrniiproekta no.9:91-96 '62. (MIRA 16:7)
(Oil field flooding)

PRAVEDNIKOV, N.K.

Comparing actual and design rates of water encroachment of layer B_{11} in the Gubinskoye field. Trudy VNII no.37:290-299 '62. (MIRA 16:6)

(Kuybyshev Province—Oil field flooding)

PRAVEDNIKOV, N.K.

Comparing the estimated and actual water encroachment of the B_2 layer in the Zaborovskoye field. Nauch.-tekh. sbor. po dob. nefti no.16:62-65 '62. (MIRA 15:9)

1. Vsesoyuznyy neftegazovyy nauchno-issledovatel'skiy institut.
(Kuybyshev Province--Oil field flooding)

PRAVEDNIKOV, N.K.

Calculating the water encroachment of water-oil contact pools in stratified nonuniform reservoirs. Nauch.-tekh. sbor. po dob. nefti no.17:51-56 '62. (MIRA 17:8)

1. Ufimskiy neftyanoy nauchno-issledovatel'skiy institut.

ORLOV, V.S.; PRAVEDNIKOV, N.K.

Calculating fluid recovery in the multiline drive pattern.
Nauch.-tekh. sbor. po dob. nefti no.15:54-58 '61. (MIRA 15:9)

1. Vsesoyuznyy neftegazovyy-issledovatel'skiy institut.
(Oil field flooding)

PRAVEDNIKOV, S.N. (Vinnitsa)

Method for reproducing chronic osteomyelitis in rabbits.
Exper.khir.i anest. no.6:52 '61. (MIRA 15:5)
(OSTEOMYELITIS)

PRAVEDNIKOV, S.N., dotsent

Clinical and experimental observations of the use of wire sutures in fractures of the lower jaw. Stomatologiia 37 no.2:25-26 Mr-Ap '58. (MIRA 11:5)

1. Iz gospital'noy khirurgicheskoy kliniki (zav.-prof. I.A. Shreyer) Vinnitskogo gosudarstvennogo meditsinskogo instituta (dir.-dotsent S.I. Korkhov)
(JAWS--FRACTURE)

PRAVEDNIKOV, S.N.

Local penicillin therapy of facial furuncolosis and carbunculosis.
Sovet. med. No.1:13 Jan 52. (CIML 21:4)

1. Of the Clinic of Hospital Surgery (Head--Prof. I.A. Shrayer), Vinnitsa State Medical Institute.

PRAVEDNIKOV, S.N., dotsent; GABOVICH, R.D., professor

Effect of sodium fluoride on the healing of perforated fedects of the lower jaw and fractures of the long bones. Ortop.travm. i protez. 17 no.6:135 N-D '56. (MLRA 10:2)

1. Iz Vinnitskogo meditsinskogo instituta (direktor - dotsent S.I. Korkhov)
(SODIUM FLUORIDE) (BONES--WOUNDS AND INJURIES)

PRAVEDNIKOV, S.N., dotsent (Vinnitsa, ul. 1-go Maya, d.140)

Filling of bone cavities with minced muscle tissue in chronic osteomyelitis; experimental clinical research. Nov. khir. arkh. no.4:24-31 Jl-Ag '60. (MIRA 15:2)

1. Kafedra gospital'noy khirurgii (zav. - prof. I.A.Shrayer) Vinnitskogo meditsinskogo instituta i Ukrainskiy tsentral'nyy nauchno-issledovatel'skiy instituta ortopedii i travmatologii (nauchnyy rukovoditel' - prof. F.R.Bogdanov).
(OSTEOMYELITIS) (MUSCLE--TRANSPLANTATION)
(BONES--SURGERY)

SLONIMSKIY, G.L.; GATOVSKAYA-RONINA, T.V., kand.khim.nauk [translator]; PRAVEDNIKOVA, A.N., kand.khim.nauk [translator]; KARGIN, V.A., akademik, red.; MARKEVICH, Yu.M., kand.khim.nauk, red.

"Textbook of polymer chemistry" translated for the English by F.W.Billmeyer. Reviewed by G.L.Slonimskii. Vyskom.soed. 1 no.2: 333-334 F '59. (MIRA 12:10)
(Polymers) (Billmeyer, F.W.)

PRAVEDNIKOVA, D. Y., and SUYEV, Y. S.

"Influence of strain on the ozonization rate of rubbers," a paper presented at the 9th Congress on the Chemistry and Physics of High Polymers, 28 Jan-2 Feb 57, Moscow, Rubber Research Inst.

B-3,084,395

KHVOSTOVA, V.V.; PRAVEDNIKOVA, G.L.

Study of meiosis in constant 56-chromosome intermediate forms of Triticum-Agropyron hybrids. Dokl.AN SSSR 138 no.1:215-218 My-Je '61. (MIRA 14:4)

1. Institut biologicheskoy fiziki AN SSSR i Institut tsitologii i genetiki Sibirskogo todeleniya Akademii nauk SSSR. Predstavleno akademikom N.V.TSitsinym.

(RITICUM-AGROPYRON HYBRIDS) (CHROMOSOMES)

PRAVEDNIKOVA, O.D.

Studying the functioning of magnifying glasses. Fiz. v shkole 18 no.1:31-33 Ja-F '58. (MIRA 11:1)

1. Dal'nevostochnyy gosudarstvennyy universitet, g. Vladivostok.
(Lenses--Study and teaching)

Pravednikova, O.D.

AUTHOR: Pravednikova, O.D. 47-58-1-13/35

TITLE: A Study of the Magnifying Glass (Ob Izuchenii deystviya lupy)

PERIODICAL: Fizika v Shkole, 1958, # 1, pp 31-33 (USSR)

ABSTRACT: When pupils begin studying various optical instruments in the 10-th class of the high school, it is advisable to begin this study with the magnifying glass, which is the eye-piece of all complex optical instruments. The senior class text books on physics do not emphasize the necessity of studying magnifying glasses. The method of teaching this subject should be changed.

ASSOCIATION: Dal'nevostochnyy gosudarstvennyy universitet, g. Vladivostok (The State University of the Far East, Vladivostok)

AVAILABLE: Library of Congress

Card 1/1

ZUYEV, Yu.S.; PRAVEDNIKOVA, S.I.; LIKHTMAN, T.V.

Stress dependence of rupture time in the cracking of rubbers in aggressive media. Vysokom.soed. 5 no.2:262-268 F '63. (MIRA 16:2)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubber—Testing) (Strength of materials)

PRAVEDNIKOVA, S.I.

76-11-33/35

AUTHORS: Zuyev, Yu.S., Pravednikova, S.I.

TITLE: On the Article by N.N. Znamenskiy "On the Kinetics of the Interaction Between Ozone and Rubber" (Po povodu stat'i N.N.Znamenskogo "K voprosu o kinetike vzaimodeystviya ozona s rezinoy")

PERIODICAL: Zhurnal Fizicheskoy Khimii, 1957, Vol. 31, Nr 11, pp. 2586-2588 (USSR)

ABSTRACT: The article is criticised, and faults are pointed out one by one and dealt with in form of a summary; it is contented that Znamenskiy's method for an accurate investigation of the kinetics of bursting under the influence of ozone is not to be used in practice, that it is too complicated for mass-experiments, and that it is not provided with the necessary equipment and devices. For these purposes it is necessary to employ methods in which, during the test, the deformation, the average value of tension, and other factors remain constant [Ref. 14]. There are 3 figures and 14 references, 11 of which are Slavic.

AV.

Card 1/2

Card 2/2

S/138/61/000/001/007/010
A051/A029

AUTHORS: Zuyev, Yu. S., Pravednikova, S. I.

TITLE: Methods of Testing Rubber for Stability to Ozone Cracking

PERIODICAL: Kauchuk i rezina, 1961, No. 1, pp. 30-32

TEXT: The authors point out that the existing methods for ozone cracking stability used in testing newly processed rubbers can prove erroneous, since a definite correpondence between the working capacity of the article and its characteristics for this type of testing in new rubbers can be lacking. The following two characteristics of ozone cracking are said to be accepted to-day: time until the appearance of cracks (Refs. 1 - 5) and degree of cracking (Ref. 3). It is stressed that τ_i, the time prior to the appearance of the cracks, cannot completely characterize the stability of the rubber to ozone, since this factor only reflects the resistance of the rubber to ozone during the stage of crack formation and does not reflect its properties at the stage of crack growth until complete destruction. It is further stressed that τ_t, the time prior to tear should be considered the main index and should determine the working capacity of the majority of articles, both in-

Card 1/5

Methods of Testing Rubber for Stability to Ozone Cracking

dices should be used, however, to characterize the rubber. The conditions under which the test is conducted, such as nature of deformation, ozone concentration, temperature, are important for a correct evaluation of the ozone stability. The change in the critical deformation varies for various rubbers within the limits of 5 to 80 % and depends on the method of the test (Refs. 7, 14). When introducing anti-ozone-aging agents, the relative change of the ozone resistance also depends on the value of deformation (Fig. 2). In order to get a more accurate picture of the working capacity of the article, the tests should be carried out at deformations close to working conditions. Depending on the used concentrations of ozone, the relative stability of the various rubbers can be different (Refs. 18, 19), i. e., a rubber can be stable at a higher concentration and prove to be less stable under atmospheric conditions; thus the results of rapid tests can be false even qualitatively. The area of the critical deformation of the given rubber hardly depends on the value of the ozone concentration (Ref. 19). It is still unknown how to treat in rapid tests the rate of diffusion of the anti-ozone-aging agents and waxes on the rubber surface. It is considered expe-

Methods of Testing Rubber for Stability to Ozone Cracking

dient, both from the point of view of cutting down the testing time and of obtaining more accurate results, to conduct the tests at a few comparatively high concentrations of ozone. The rubber tests on ozone cracking stability are carried out at various temperatures. With a change in the temperature the region of the critical deformation shifts. The same temperature range, at which the rubbers work, should be used for testing to obtain more accurate results. There are 2 graphs and 21 references: 8 Soviet, 13 English.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

Card 3/5

S/138/61/000/001/007/010
A051/A029

Methods of Testing Rubber for Stability to Ozone Cracking

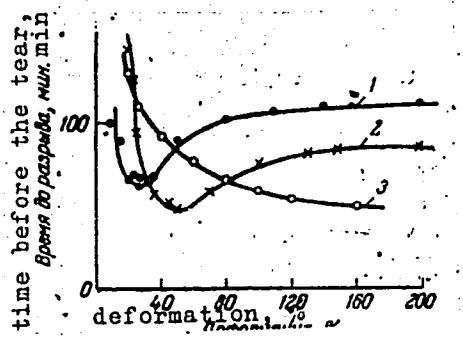


Figure 1:

Relationship of the time before the tear to the content of ceresin and magnitude of the deformation of the СКС-30 (SKS-30), vulcanizate filled with 30 w.p. of channel carbon black (ozone concentration 0.0012 %):

1 - without ceresin,
2 - 2 w.p. ceresin,
3 - 5 w.p. ceresin.

Card 4/5

S/138/61/000/001/007/010
A051/A029

Methods of Testing Rubber for Stability to Ozone Cracking

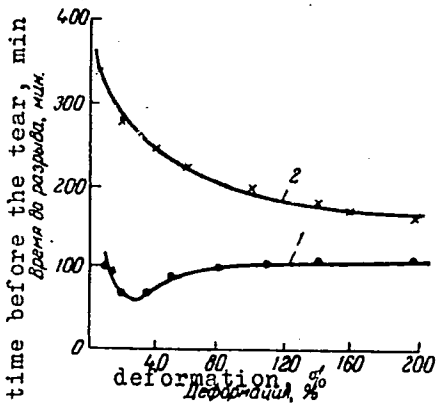


Figure 2:

Relationship of time before the tear to the content of anti-ozone-aging agent and magnitude of the deformation of the SKS-30 vulcanizate filled with 30 w.p. of channel carbon black (concentration of ozone 0.0017 %):

1 - without anti-ozone-aging agent,
2 - 5 w.p. UOP-88.

Card 5/5

ZUYEV, Yu.S.; PRAVEDNIKOVA, S.I.; ZHEREBKOVA, L.S.; ZAYTSEVA, V.D.

Rupture life of rubbers in the presence of physically aggressive media. Vysokom.soed. 5 no.8:1201-1206 Ag '63. (MIRA 16:9)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubber--Testing)

ZUYEV, Yu.S.; PRAVEDNIKOVA, S.I.; KOTEL'NIKOVA, G.V.

Effect of waxlike substances and ozone-aging inhibitors on the resistance of rubber to ozone cracking. Kauch.i rez. 21 no.3: 21-24 Mr '62. (MIRA 15:4)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubber, Synthetic--Testing)

ZUYEV, Yu.S., kand.khimicheskikh nauk; PRAVEDNIKOVA, S.I.

Effect of the concentration of ozone on the cracking of rubbers. Trudy NIIRP no. 6:3-15 '60. (MIRA 13:12)
(Rubber--Testing) (Ozone)

15.9300

26881
S/081/61/000/013/021/028
B117/B203

AUTHORS: Zuyev, Yu. S., Pravednikova, S. I.

TITLE: Effect of ozone concentration on crackiness of rubbers

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 13, 1961, 652, abstract 13Т330 (Tr. N.-i. in-ta rezin. prom-sti, sb. 6, 1960, 3-15)

TEXT: The authors studied the crackiness of rubber from СКС-30 (SKS-30) and nairit as dependent on the ozone concentration over a wide range of deformations. They determined the time before cracking τ_0, the growth rate of cracks on a steady section V, and the time of full destruction of the specimen τ_1. The dependence of τ_0, τ_1, and V on the concentration of O_3 (c) has the form $\log \tau = \log K - n \log c$, where K and n are coefficients dependent on the deformation (ε); $n \sim 1$ with exception of cracking of nairit rubber at +6°C and -8°C. Under these conditions, n grows up to 2.5 and 5.8. This is connected with the change in kinetics of the chemical reaction of O_3 with the polymer at low temperature if each process of

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26881
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B117/B203

Effect of ozone concentration on ...

destruction comprises a great number of processes of interaction of O_3 with the polymer double bond. The dependence of τ_0, τ, and γ on ε retains the same character with a change of c between 0.15 and 0.0002%. ε(crit) is also independent of c. It is convenient to determine the relative stability of various rubbers to cracking dependent on the ozone concentration for different ε (if possible, for ε(crit)), and to characterize it by the values of c at which equal τ_1 are attained for all rubbers.

[Abstracter's note: Complete translation.]

Card 2/2

S/190/63/005/002/018/024
B101/B102

AUTHORS: Zuyev, Yu. S., Pravednikova, S. I., Likhtman, T. V.

TITLE: Stress dependence of rupture time in the cracking of rubbers in aggressive media

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 5, no. 2, 1963, 262-268

TEXT: The correlation between static fatigue and corrosion cracking was examined by determining the dependence of the lifetime τ_1 on the stress at 0.001-0.002 ozone concentration in natural and synthetic rubbers with and without filler or plasticizer. The tangent b of the angle of inclination of the straight line $\log \tau_1 = f(\log \sigma)$, was determined. The deformation was kept so low that its effect on the structure was negligible. Results: In natural rubber and СКБ(SKB) rubber with an active filler b was ~0.35; in polar rubbers, such as СКН-26 (SKN-26) and nitrile rubber b was 0.80 and 0.75, respectively. With higher polarity, e.g., in СКН-40 (SKN-40) rubber, b increased to 1.45. Dilution of the rubber

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a filler inert to ozone resulted in an increase of b. This is due to changes in the stress distribution, chemical activity and intermolecular interactions. $b = b_o \exp(-kv_1)$, where b_o is the b of the non-filled rubber, and $v_1 = (v - v')/v$; v is the volume of the rubber, v' is the volume of the ingredient. A distinct parallelism was observed between ozone cracking and static fatigue. For both $\tau_1 = B\sigma^{-b}$. Thus, the corrosive breakdown of rubbers under stress is only a special case of static fatigue. There are 8 figures.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

SUBMITTED: September 7, 1961

Card 2/2

that in the presence of these substances the number of cracks are reduced, especially within the range of deformations greater than the critical value. It is experimentally concluded that waxes increase the time prior to the appearance of cracks under all deformations; the time prior to tear increases in the range of 20 - 40% deformations and decreases within the deformation range higher than these values. The anti-ozone aging agents increase the time prior to the appearance of cracks and thetime when the tear occurs under all deformations, but their protective effectiveness decreases with an increase of the deformation. The t_i/t relation increases with the introduction of protective substances into the vulcanizate. The exception is that case where neozone D is introduced into nairite rubber. When protective substances are introduced in quantities of 5 to 100 w.p. of rubber, the relation $t - \varepsilon$ becomes monotonous. There are five figures, 1 table and 7 references: 5 Soviet-bloc and 2 non-Soviet-bloc. The reference to the most recent English-language publication reads as follows:
4) H.A. Vodden, M.A., Wilson, Trans.Inst.Rubb.Ind., 35, 82 (1959).

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry).

ZUYEV, Yu.S.; PRAVEDNIKOVA, S.I.

Methods of testing rubbers for resistance to ozone cracking. Kauch. i rez. 20 no.1:30-32 Ja '61. (MIRA 14:3)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubber--Testing) (Ozone)

S/190/61/003/002/001/012
B130/B202

AUTHORS: Zuyev, Yu. S., Borshchevskaya, A. Z., Pravednikova, S. I., Wu Yüch-ch'in

TITLE: Temperature effect on the durability of rubber in the case of crazing due to corrosion

PERIODICAL: Vysokomolekulyarnyye soyedineniya, v. 3, no. 2, 1961, 164-173

TEXT: The authors studied the corrosion destruction of a vulcanizate produced on the basis of a carboxyl-containing divinyl styrene rubber СКС-30-1 (SKS-30-1) under the action of 1N HCl, 0.24 N CH_3COOH and gaseous HCl (0.82 mmole/mole) and ozone. On corrosion, the vulcanizing agent MgO passes into solution; the reaction kinetics can be inferred from the concentration of Mg^{++} in the solution. It was determined photocolorimetrically with titanium yellow. τ_r, the time passing until the rupture was assumed to be the fundamental characteristics of the process. Deformation ε was kept constant. The specimens were chosen such that they had the same thickness in deformed state. The apparent activation energy u of the effect of HCl

Card 1/7

Temperature effect on ...

on the non-deformed rubber specimens was determined from the inclination of the straight line which is obtained when plotting the kinetic curve of the accumulation of Mg^{++} in the coordinates c, $\sqrt{\tau}$. For ε = const double bands applied to frames were investigated and the mean values were determined from 16-40 experiments. Swelling in HCl is 0.6-1.9% at a temperature of 25-40°C during 2 hr. It was 2.7-14% in acetic acid under equal conditions. The temperature dependence of τ_r for ε = const and σ = const can be expressed by the Arrhenius equation

$\tau_r = Ae^{u/RT_c - \alpha}$. The rate of the reaction between non-deformed rubber and a corroding medium is determined by diffusion. The rate of destruction of a deformed rubber is determined by the rate of the chemical reaction with the medium. The apparent activation energy (u) hardly changes in the region of deformation of 30-80%; it amounts to approximately 20 kcal/mole. On passage to deformation from 500-700%, however, it increases to ~30 kcal/mole. The temperature coefficient of the rupture depends on the type of the destroyed bonds and on the ability of the corroding medium of being adsorbed by rubber. On rupture in a gaseous medium the apparent activation energy is lower than in solutions of the same agent. The time

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Temperature effect on ...

passing until the rupture of the rubber depends on complex factors. It attains a minimum in the region of critical deformation ε_{kr}. ε_{kr} depends on temperature, on the type of the corrosive agent, and the state (gas, solution) of the medium. Anomalies may occur as a result of the displacement of ε_{kr} in the case of temperature changes. In the case of lower temperatures, the time passing until the rupture may be shorter than in the case of higher temperatures under equal conditions. G. M. Bartenev, S. N. Zhurkov, L. S. Bryukhanova, B. N. Narzulayev are mentioned. There are 11 figures, 1 table, and 15 references: 14 Soviet-bloc and 1 non-Soviet-bloc. The reference to English language publication reads as follows: B. D. Cadle, S. Schadt, J. Amer. Chem. Soc. 74, 6002, 1952; J. Chem. Phys. 21, 163, 1953.

ASSOCIATION: Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti (Scientific Research Institute of the Rubber Industry)

SUBMITTED: June 30, 1960

Card 3/7

Temperature effect on ...

Fig. 3

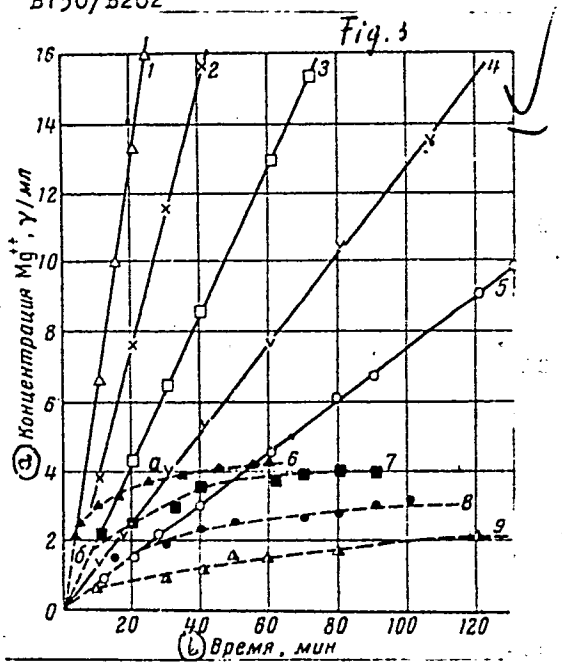

Fig. 3: Change of the concentration of the Mg^{++} ions separated by the vulcanizate in 1N HCl at different temperatures. Non-deformed vulcanizates: dashed lines, deformed vulcanizates: solid lines
Legend: a) concentration, b) time, min

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Temperature effect on ...

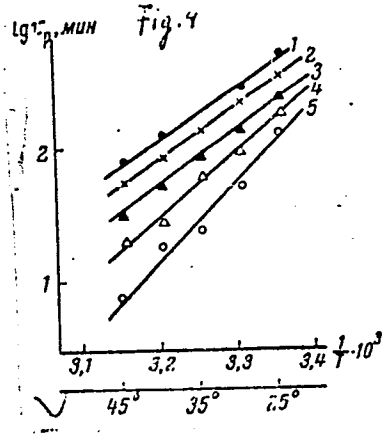
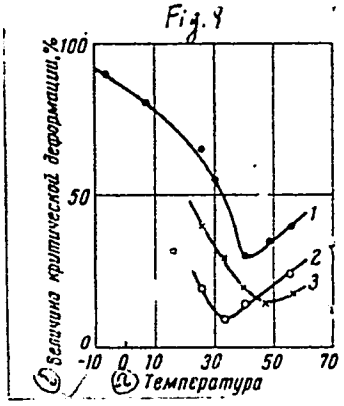


Fig. 4: Temperature dependence of the time passing until the rupture of rubber SKS-30-1 (ε = const) in 1N HCl with deformations (in %): Legend: 1) 30; 2) 40; 3) 60; 4) 500; 5) 725

Card 5/7

Temperature effect on ...

Fig. 9: Temperature dependence of $\varepsilon_{кр}$: 1) nairite; 2) SKS-30 without channel black; 3) SKS-30 with 50 parts by weight of channel black;
Legend: a) temperature; b) deformation

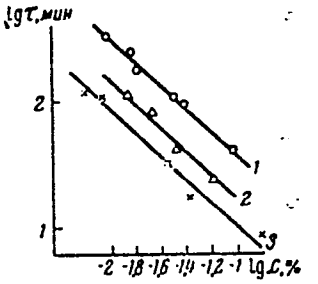


Card 6/7

S/190/61/003/002/001/012
B130/B202

Temperature effect on ...

Fig. 11: Dependence of time passing until the rupture of SKS-31-1 rubber with 40% deformation on the HCl concentration at different temperatures: 1) 45°C; 2) 25°C; 3) 30°C.



Card 7/7

AUTHORS: Zuyev, Yu. S., Kravednikova, G. I. SOV/76-32-7-3/45

TITLE: A Kinetic Study of the Ozone Cracking of Rubber (Issledovaniye kinetiki ozonnogo rastreskivaniya rezin)

PERIODICAL: Zhurnal fizicheskoy khimii, 1958, Vol. 32, Nr 7, pp. 1457-1465 (USSR)

ABSTRACT: Rubber being in the state of tension in the presence of ozone is subjected to cracking. A systematic investigation of the kinetics of this process does not exist with the exception of a few papers dealing with this subject, among them those of Buckley and Robison (Ref 7), as well as N.M.Znamenskiy (Ref 8). The present investigations were carried out according to a new method, which is characterized by a reduction of the stress which causes the constant deformation of the sample at the occurrence of cracks and their increase. The kinetics of the increasing of the cracking layer can be calculated according to this decrease, as can the proportional value of the mean effective depth of the crack. In the investigations the authors used an apparatus which made it possible to carry out periodical stress measurements with 10 samples during ozonization without changing the extent of deformation and

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A Kinetic Study SOV/76-32-7-3/45
of the Ozone Cracking of Rubber

the concentration of ozone. The kinetic curves of the increase of the cracks according to the cross section of the sample may be divided into 4 sections: The induction period within which no visible decrease of the stress takes place. The section in which the velocity of the growth of cracks increases continuously. The steady section which is characterized by a constant velocity of the increase of the cracks, and finally the rapid rupture of the sample. It was observed that the stages of the second and third section last longest, and that of the last shortest. A comparison of the experimental data for the purpose of investigating the process showed that also in rubber which contains no ozone protecting substance a retardation, as in polymethyl methacrylates is found in the case of ozone cracking. The observations made in the experiments on the influence exerted by the thickness of the sample on the kinetics of the reaction are explained by the fact that the process of ozone cracking takes place gradually in the surface layer and the openings of the cracks. In the explanations of the results obtained the authors mention that the presence of the second, unsteady section of the reaction

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A Kinetic Study of the Ozone Cracking of Rubber

kinetics with a superstress and its increase in the openings of the cracks may be explained according to the extent of their depth; this is also explained by the different character of the function of time taken until the occurrence of cracks and the time until the cracking - versus the deformation. The strong increase of the velocity of the process after the third stage is explained by the fact that in the undestroyed part of the sample an accumulation of inner defects by the static fatigue proceeds, and that in the penetration of the crack to this part it increases rapidly. There are 5 figures, 3 tables, and 28 references, 12 of which are Soviet.

ASSOCIATION: Institut rezinovoy promyshlennosti, Moskva
(Moscow Institute of Rubber Industry)

SUBMITTED: January 12, 1957

A Kinetic Study of the Ozone Cracking of Rubber SOV/76-32-7-3/45

1. Rubber--Mechanical properties 2. Ozone--Chemical effects 3. Rubber--Stresses
4. Rubber--Fatigue

Card 4/4

SOV/81-59-9-33457

Translation from: Referativnyy zhurnal. Khimiya, 1959, Nr 9, p 563 (USSR)

AUTHORS: Zuyev, Yu.S., Pravednikova, S.I.

TITLE: A Method for Objective Determining the Kinetics of Ozone Cracking of Rubbers

PERIODICAL: Tr. N.-i. in-ta rezin. prom-sti, 1956, Nr 3, pp 114 - 122

ABSTRACT: The degree of ozone cracking of rubbers is characterized by a decrease in the nominal equilibrium tension in the samples during their ozonization, which is connected with macroscopic changes in a limited zone of the sample. The entire kinetics of the process is determined on one sample and the tension measurements are carried out without taking it from the testing chamber. A device for determining the kinetics of the widening of the cracks has been described. The design of the device permits the tension to be exactly measured on every sample. Experimental data obtained on the device are cited. Using the results of the periodic determination of the nominal tension, the average efficient depth of the cracks and their growth rate are calculated.

Card 1/1

V. Glagolev

(RA VEDNIKOVA, S. I.

ZUYEV, Yu.S.; PRAVEDNIKOVA, S.I.

Effect of deformation on crack formation in rubber caused by ozone.
Dokl. AN SSSR 116 no.5:813-816 O '57. (MIRA 11:2)

1.Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
Predstavleno akademikom P.A. Rebinderom.
(Rubber) (Deformations (Mechanics))

TRAVOZNIKOVA, S.I.

Zhurnal Fizicheskoy Khimii
1958, Vol 32, Nr 7

A KINETIC STUDY OF THE OZONE CRACKING OF RUBBER

Yu. A. Zuev and S. I. Travozhnikova (Moscow)

Distr: 4E2c(j)

Summary

A method has been proposed for studying the kinetics of the ozone cracking of rubber on a strained specimen by following the increase in the cracked portion of the cross section of the specimen. In general the kinetic curves consist of four sections, the existence and the length of which are connected with the amount of deformation of the specimen.

Common to all the curves (for different strain and different ozone concentrations) is a section representing the constant rate of growth of the cracks.

A comparison of the data on the kinetics of the ozone cracking of rubber with those for polymethylmethacrylate shows the processes to obey a number of similar laws which is evidence of a certain analogy between them.

PRAVEDNIKOVA, S. I.

ZUYEV, Yu.S.; PRAVEDNIKOVA, S.I.

On the article by N.N. Znamenskii "Kinetics of the interaction between ozone and rubber." Zhur. fiz. khim. 31 no.11:2586-2588 N '57. (MIRA 11:3)

1.Institut rezinovoy promyshlennosti, Moskva.
(Ozone) (Rubber)
(Znamenskii, N.N.)

PRAVEDNIKOVA, S.I.

AUTHORS: Zuyev, Yu. S., Pravednikova, S. I. 20-5-26-48

TITLE: Influence of the Degree of Deformation on the Formation of Cracks in Rubber Caused by Ozone (Vliyaniye stepeni deformatsii na ozonnoye rastreskivaniye rezin).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 116, Nr 5, pp. 813-816 (USSR)

ABSTRACT: At first several previous works are mentioned. The authors investigated in detail the influence mentioned in the title of this work and calculated the velocity of growth of the cracks by means of an objective method (reference 8) from the effective depth of the cracks. The kinds of rubber investigated are mentioned. This investigation showed the following:

1.) With all coutchoucs a qualitatively equal dependence of the time passing till the formation of cracks on the intensity of deformation is observed. With growing deformation this time gradually decreases to zero.

2.) The velocity of growth found for the steady range of the kinetic curve initially increases with growing deformation, passes a maximum within the range of small deformations and then decreases again. With all coutchoucs,

Card 1/3

and independent from their characteristics the period passing till the crack occurs passes a minimum within the range of critical deformation and a maximum within the range of great deformations if there is a change of the deformation within the range of critical deformation. The results obtained show the following:

1.) The strength of the rubbers in the case of multiple regularities obeys to the same regularity as with the formation of cracks by ozone. With all rubbers we observe a minimum of strength too. The destruction (formation of cracks) of deformed rubber by means of chemical interaction with ozone develops analogously with the process of static fatigue although the velocities of these processes differ by many orders. From this follows the principal possibility of the accelerated investigation of the static fatigue of rubber, especially within the range of small deformations, by means of the formation of cracks dependent on ozone.

2.) Very small nominal deformations (of the order of 10 %) change the degree of orientation of structural units at the end of the cracks. A sensitive indicator of

Influence of the Degree of Deformation on the Formation of Cracks in Rubber Caused by Ozone. 20-5-26/48

these changes is the resistance of rubber against destruction in ozone. This phenomenon can principally be used as basic for the investigation of the orientation of rubber. There are 4 figures, 1 table, and 11 references, 5 of which are Slavic.

ASSOCIATION: Scientific Research Institute of Rubber Industry (Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti).

PRESENTED: June 6, 1957, by P. A. Rebinder, Academician

SUBMITTED: November 22, 1957.

AVAILABLE: Library of Congress

Card 3/3

ZUYEV, Yu.S.; BORSHCHEVSKAYA, A.Z.; PRAVEDNIKOVA, S.I.; U YUE-TSIN'[Wu Yüeh-ch'in]

Effect of temperature on the durability of rubbers undergoing corrosive cracking. Vysokom. soed. 3 no.2:164-173 F '61. (MIRA 14:5)

1. Nauchno-issledovatel'skiy institut rezinovoy promyshlennosti.
(Rubber, Synthetic--Thermal properties)

VASIL'YEVA, G.A.; POLOVTSEVA, Yu.M.; IGNASHCHENKOVA, N.V.; ZAF'YANTSEVA, I.N.; SUDNIK, R.M.; PRAVEDNOVA, M.L., red.; KONDRAT'YEVA, T.F., kand.tekhn.nauk, red.; ALFEYEVA, N.A., inzh.red.

[Reliability and durability of piston machines; annotated bibliographical index: Soviet and foreign literature published in 1960-1963] Nadezhnost' i dolgovechnost' porshnevykh mashin; annotirovannyi bibliograficheskii ukazatel': otechestvennaia i inostrannaia literature 1960-1963 gg. Leningrad, Otdel nauchno-tekhn. informatsii, 1964. 144 p. (MIRA 18:7)

1. Moscow. Vsesoyuznyy nauchno-issledovatel'skiy i konstruktorskiy institut khimicheskogo mashinostroyeniya. Leningradskiy filial.

L 16483-66 EPF(n)-2/EWP(j)/T/EWA(h)/EWA(1) GG/RM
ACC NR: AP6008583 SOURCE CODE: HU/0005/65/071/002/0057/0062

AUTHOR: Kiss, Laszlo; Pravednyikov, A. N.; Medvegyev, Sz. Sz.

ORG: Research Institute of the Plastics Industry, Budapest (Muangyagipari Kutato Intezet)

TITLE: Investigation of the nature of the active centers initiating the low-temperature radiation polymerization of acrylonitrile

SOURCE: Magyar kemiai folyoirat, v. 71, no. 2, 1965, 57-62

TOPIC TAGS: radiation polymerization, gamma radiation, organic nitrile compound

ABSTRACT: The experimental techniques employed in these studies were those described by the authors in "Radiation Chemistry", published in 1964 by the Academic Press (Akademiai Kiado) in Budapest. The γ-ray-initiated polymerization of acrylonitrile in an electric force field was investigated in the +20° to -80°C temperature range. It was found that the low-temperature polymerization is initiated by free anion radicals. Whether the reaction proceeds as a free-anion reaction or as a free-radical reaction is determined by the prevailing anion radical - double radical equilibrium. Orig. art. has: 6 figures, 8 formulas, and 3 tables. [JPRS]

SUB CODE: 07 / SUBM DATE: 12Jun64 / ORIG REF: 001 / OTH REF: 008
SOV REF: 003
Card 1/1 vmb

SHPIL'BERG, B.A.; SHELESTOV, M.S.; GRUZDEV, A.K.; PRAVEDNYKH, Ye.Z.
FILICHKIN, I.Ye.; ZHAVORONOK, V.I.

Zyryanovsk deposit sulfide complex ore dressing in heavy suspensions.
Biul. TSIIN tsvet. met. no.19/20:34-39 '57. (MIRA 11:5)
(Zyryanovsk--Sulfides)
(Ore dressing)

SOV/137-58-7-14023

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 7, p 5 (USSR)

AUTHORS: Shpil'berg, B. A., Shelestov, M. S., Gruzdeva, A. K., Pravednykh, Ye. Z., Filichkin, I. Ye., Zhavoronok, V. I.

TITLE: Experiences in the Concentration of the Polymetallic Sulfide Ores of the Zyryanovskoye Deposit in Heavy Suspensions (Opyt obogashcheniya v tyazhelykh suspenziyakh sul'fidnoy polimetallicheskoy rudy Zyryanovskogo mestorozhdeniya)

PERIODICAL: Byul. tsvetn. metallurgii, 1957, Nr 19-20, pp 34-39

ABSTRACT: Laboratory investigations have proved the possibility of concentrating the -30+4 mm class in suspensions, in which the tailings take 43.5% of the ore, with 0.04% Cu, 0.13% Pb, and 0.14% Zn. Losses in the tailings are: 4.9% Cu, 3.2% Pb, and 2% Zn. The concentration in the concentrate consisted of 0.57% Cu, 3.11% Pb, and 4.98% Zn. The Zyryanovsk Kombinat has built an experimental plant to handle 80-100 t/day. A description is offered of the I. L. Denisov mushroom valve for automatic maintenance of the level in the suspension feeder. The work of the plant has demonstrated the possibility of removing 45% of the ore in the tailings (of the original, or 61% of the

Card 1/2

SOV/ 137-58-7-14023

Experiences in the Concentration of the Polymetallic (cont.)

class) with a content of 0.04% Cu, 0.16% Pb, and 0.19% Zn, with extraction (from the 35-5 mm class) respectively of 7.5%, 6.5%, and 4.5%. In the concentrate, the Cu, Pb, and Zn contents were 0.8%, 3.62%, and 6.19%, with recovery of 92.5%, 93.5%, and 95.5% of the class. It was found desirable to have separate concentration of the 10-5 and 10-35 mm classes. Losses of PbS in the tailings were 45 g per t starting ore.

I. M.

1. Sulfide ores--Processing 2. Sulfide ores--Separation

Card 2/2

10(4) SOV/98-59-9-18/29

AUTHOR: Pravednyy, G.Kh., Candidate of Technical Sciences

TITLE: About Instruction on Designing Counter Drains at Hydraulic Structures

PERIODICAL: Gidrotekhnicheskoye stroitel'stvo, 1959, Nr 9, p 51 (USSR)

ABSTRACT: A new Soviet book is listed and described.

Card 1/1

SURIN, A.A., professor; RUMYANTSEV, P.N., kandidat tekhnicheskikh nauk; PRAVEDNYY, G.Kh., inzhener.

Hydraulic impact and its control in railroad water pipelines. Sbor. LIIZHT no.144:155-161 '52. (MIRA 8:4)
(Water pipes) (Hydraulics)

CA 26

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PRAVEL, D. Experiences of the Vasia Vasilescu plants in sizing wraps of staple fibers. p. 471

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ACCESSION NR: AP4020252 S/0129/64/000/003/0061/0063

AUTHORS: Zemskov, G. V.; Kaydash, N. G.; Praven'kaya, L. L.

TITLE: Boronizing of iron and steel in vacuum

SOURCE: Metallovedeniye i termicheskaya obrabotka metallov, no. 3, 1964, 61-63

TOPIC TAGS: iron boronizing, steel boronizing, vacuum boronizing

ABSTRACT: This study is an analysis of vacuum boronizing of iron and steel. The boronizing was done in a TGB-1M vacuum furnace at a pressure of 3×10^{-3} mm Hg in a mixture of boron carbide and borax. Active boron which is formed in the reaction mixture at high temperatures diffuses into the metal. The boron contacts the article's surface primarily in a vaporized state. The boronizing of armco-iron and 45 steel in mixtures of varying composition was carried out at 900C for 4 hr. The greatest boride layer thickness is attained with a mixture containing 16—18% borax. The thickness of the boride layer depends upon duration and temperature of the saturation process

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and carbon content in the steel. When the duration of the process is extended and temperature is increased, the thicknesses of the boride layer increase. The thicknesses decrease with an increase in the percentage content of carbon in the steel. The most dense boride layers are obtained at 900—1000C for 6—9 hr. Orig. Art. has: 2 figures and 1 table.

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ZEMSKOV, G.V.; KAYDASH, N.G.; PRAVEN'KAYA, L.L.

Boron coating of iron and steel in vacuum. Metalloved. i term. obr. met. no.3:61-63 Mr '64. (MIRA 17:4)

1. Odesskiy politekhnicheskiy institut.